



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|-----------------------|---------------------|------------------|
| 10/636,148 | 08/07/2003 | James Charles Bohling | A01406 | 1799 |

21 898 7590 02/23/2005
ROHM AND HAAS COMPANY
PATENT DEPARTMENT
100 INDEPENDENCE MALL WEST
PHILADELPHIA, PA 19106-2399

EXAMINER

ZEMEL, IRINA SOPJIA

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1711

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/636,148

Applicant(s)

BOHLING ET AL.

Examiner

Irina S. Zemel

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patnet 4,486,313 to Meitzner et al., (hereinafter "Meitzner").

Rejection of claims 1-10 stands as per reasons set for the in the previous office action.

Response to Arguments

Applicant's arguments filed 11-22-2004 have been fully considered but they are not persuasive. Applicants argue that at Col. 7, lines 57-58, says that the amount of crosslinker may be varied widely within the scope of the present invention. This qualification strictly limits the teaching of Meitzner to crosslinker amounts of no less than 4%. Thus, Meitzner not only does not suggest using smaller amounts of crosslinker, it actually teaches away from doing so. The examiner disagrees with this position. The patentee expressly teaches in column 7, lines 56 et seq. (referred to by the examiner in the previous office action) that it is well known in the art that degree of crosslinking, which is governed by the amount of crosslinker, "has a profound effect n the physical properties of the product." Indeed, it is well known in the art that a wide variety of physical properties of a polymer will greatly depend degree of crosslinking. For example, in column 8, lines 11, et seq., the reference expressly discusses the effect of low degree of crosslinking on a polymer properties, such as high swelling in organic

Art Unit: 1711

media and have lower oxidation resistance. While those properties may be undesirable for one application, it is clearly may have advantages for different applications.

Therefore, lowering the amount of crosslinking agent to in the invention disclosed by Metzner to the amounts claimed by applicants, even if, arguendo, the claimed amounts are outside the amounts disclosed by the patentee, would have been clearly obvious for an ordinary artisan to achieve desired physical properties of a polymer depending of its end use since it is well known on the art that varying the amount of crosslinker "has a profound effect n the physical properties of the product."

The applicants further argue that Meitzner teaches preparation of beads having macroreticular structure" (Abstract) by incorporating into the monomer mixture 25-60% (Co1. 3, line 66) of a "precipitant," i.e., a compound which is a solvent for the monomers, but not the polymer. There is nothing in Meitzner to suggest the limitations of the present claims. It is presumed that the limitation referred to by the applicants is the limitation directed to the lack of void spaces greater than 5 μm in diameter. The applicants further submitted Declaration of Dr. Bohling attesting and providing evidence that using the procedure disclosed by Metzner, i.e., using precipitant, the beads with the claimed structure (laving no voids of 5 μm diameter) can not be achieved. The examiner carefully considered the declaration, and the examiner fully agrees with the applicants' statement that the beads prepared by the Metzner method with use of the precipitant, have numerous voids larger than 5 μm . However, the examiner strongly disagrees with the statement that by applicants that there is no suggestion to use lower crosslinker levels or to omit the porogen. Reasons for lowering the amounts of crosslinking agent

are discussed above. As far as use of porogen, while Metzner's preferred embodiments certainly use porogen, the disclosure of the reference is clearly not limited to the preferred or desired embodiments. Effects of using and/or omitting the porogen are explicitly discussed in the Metzner reference in column 4, line 61 to column 5, line 23. The reference expressly states that introduction of porogen leads to formation of microchannels larger in size than micropores commonly present in crosslinked polymers. It leads to decreased density of the resulting polymer as exemplified in Table II, and using no porogen results in the highest density as illustrated by the first example in Table II. Therefore, in view of the expressed teachings of the reference, omitting porogen would have been obvious in order to obtain a polymer with no microchannels and with higher density. Applicants argue that the improved properties of beads made according to the present invention could not have been predicted from Metzner. If applicants refer to the size of the voids (or lack thereof) as demonstrated by the Declaration, as discussed above, this property of the beads is completely expected from the teachings of Metzner expressly discussing that having larger voids or microscopic channels is a direct effect of using the precipitants. No evidence of any other unexpected results are present on the record at this time. Therefore, the invention as claimed, is still considered obvious over the disclosure of Metzner.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irina S. Zemel whose telephone number is (571)272-0577. The examiner can normally be reached on Monday-Friday 9-5.

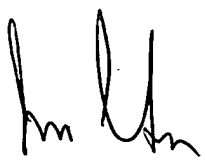
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571)272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 10/636,148
Art Unit: 1711

Page 6

ISZ



James J. Seidle
Supervisory Patent Examiner
Technology Center 1700